



#3

A-579D.ST25.txt
SEQUENCE LISTING

<110> Yoshinaga, Steven
<120> Novel Polypeptides Involved in Immune Response
<130> A-579D
<140> 09/728,421
<141> 2000-11-28
<160> 35
<170> PatentIn version 3.0
<210> 1
<211> 600
<212> DNA
<213> Mouse

<220>
<221> CDS
<222> (1)..(600)

INS
a1
<400> 1
atg aag ccg tac ttc tgc cgt gtc ttt gtc ttc tgc ttc cta atc aga
48
Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
1 5 10 15

ctt tta aca gga gaa atc aat ggc tgc gcc gat cat agg atg ttt tca
96
Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
20 25 30

ttt cac aat gga ggt gta cag att tct tgt aaa tac cct gag act gtc
144
Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
35 40 45

cag cag tta aaa atg cga ttg ttc aga gag aga gaa gtc ctc tgc gaa
192
Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
50 55 60

ctc acc aag acc aag gga agc gga aat gcg gtg tcc atc aag aat cca
240

A-579D.ST25.txt

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
 65 70 75 80

atg ctc tgt cta tat cat ctg tca aac aac agc gtc tct ttt ttc cta
 288
 Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
 85 90 95

aac aac cca gac agc tcc cag gga agc tat tac ttc tgc agc ctg tcc
 336
 Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
 100 105 110

att ttt gac cca cct cct ttt caa gaa agg aac ctt agt gga gga tat
 384
 Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
 115 120 125

ttg cat att tat gaa tcc cag ctc tgc tgc cag ctg aag ctc tgg cta
 432
 Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
 130 135 140

ccc gta ggg tgt gca gct ttc gtt gtg gta ctc ctt ttt gga tgc ata
 480
 Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
 145 150 155 160

ctt atc atc tgg ttt tca aaa aag aaa tac gga tcc agt gtg cat gac
 528
 Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
 165 170 175

cct aat agt gaa tac atg ttc atg gcg gca gtc aac aca aac aaa aag
 576
 Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
 180 185 190

tct aga ctt gca ggt gtg acc tca

600

Ser Arg Leu Ala Gly Val Thr Ser

195

200

<210> 2
 <211> 200
 <212> PRT
 <213> Mouse

<400> 2

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
 1 5 10 15

Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
 20 25 30

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
 35 40 45

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
 50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
 65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
 85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
 100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
 115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
 130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
 145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp

165

170

175

Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
 180 185 190

Ser Arg Leu Ala Gly Val Thr Ser
 195 200

<210> 3
 <211> 200
 <212> PRT
 <213> Mouse

<400> 3

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
 1 5 10 15

Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
 20 25 30

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
 35 40 45

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
 50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
 65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
 85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
 100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
 115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
 130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
 145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
 165 170 175

Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
 180 185 190

Ser Arg Leu Ala Gly Val Thr Ser

195

<210> 4
<211> 218
<212> PRT
<213> Mouse

<400> 4

Met Thr Leu Arg Leu Leu Phe Leu Ala Leu Asn Phe Phe Ser Val Gln
1 5 10 15
Val Thr Glu Asn Lys Ile Leu Val Lys Gln Ser Pro Leu Leu Val Val
20 25 30
Asp Ser Asn Glu Val Ser Leu Ser Cys Arg Tyr Ser Tyr Asn Leu Leu
35 40 45
Ala Lys Glu Phe Arg Ala Ser Leu Tyr Lys Gly Val Asn Ser Asp Val
50 55 60
Glu Val Cys Val Gly Asn Gly Asn Phe Thr Tyr Gln Pro Gln Phe Arg
65 70 75 80
Ser Asn Ala Glu Phe Asn Cys Asp Gly Asp Phe Asp Asn Glu Thr Val
85 90 95
Thr Phe Arg Leu Trp Asn Leu His Val Asn His Thr Asp Ile Tyr Phe
100 105 110
Cys Lys Ile Glu Phe Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Arg
115 120 125
Ser Asn Gly Thr Ile Ile His Ile Lys Glu Lys His Leu Cys His Thr
130 135 140
Gln Ser Ser Pro Lys Leu Phe Trp Ala Leu Val Val Val Ala Gly Val
145 150 155 160
Leu Phe Cys Tyr Gly Leu Leu Val Thr Val Ala Leu Cys Val Ile Trp
165 170 175
Thr Asn Ser Arg Arg Asn Arg Leu Leu Gln Val Thr Thr Met Asn Met
180 185 190
Thr Pro Arg Arg Pro Gly Leu Thr Arg Lys Pro Tyr Gln Pro Tyr Ala
195 200 205
Pro Ala Arg Asp Phe Ala Ala Tyr Arg Pro
210 215

<210> 5
<211> 234
<212> PRT
<213> Artificial

<220>

<223> Synthetic

<220>

<221> misc_feature

<223> Unspecified amino acid

<400> 5

Met Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg
 1 5 10 15

Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45

Val Xaa Xaa Ser Cys Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 50 55 60

Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Cys Xaa
 65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 85 90 95

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asn Xaa Xaa Val Xaa Phe Xaa Leu
 100 105 110

Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Cys Xaa Xaa Xaa
 115 120 125

Xaa Xaa Xaa Pro Pro Pro Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Gly Xaa
 130 135 140

Xaa Xaa His Ile Xaa Glu Xaa Xaa Leu Cys Xaa Xaa Xaa Xaa Xaa Xaa
 145 150 155 160

Lys Leu Xaa Trp Xaa Leu Xaa Val Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa
 165 170 175

Xaa Xaa Leu Leu Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Ile Trp Xaa Xaa Xaa
 180 185 190

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa
 195 200 205

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg
 210 215 220

Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 225 230

<210> 6
 <211> 966
 <212> DNA
 <213> Mouse

<220>
 <221> CDS
 <222> (1)..(966)

<400> 6
 atg cag cta aag tgt ccc tgt ttt gtg tcc ttg gga acc agg cag cct
 48
 Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
 1 5 10 15

gtt tgg aag aag ctc cat gtt tct agc ggg ttc ttt tct ggt ctt ggt
 96
 Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
 20 25 30

INS
 AI
 ctg ttc ttg ctg ctg ttg agc agc ctc tgt gct gcc tct gca gag act
 144
 Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
 35 40 45

gaa gtc ggt gca atg gtg ggc agc aat gtg gtg ctc agc tgc att gac
 192
 Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
 50 55 60

ccc cac aga cgc cat ttc aac ttg agt ggt ctg tat gtc tat tgg caa
 240
 Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
 65 70 75 80

atc gaa aac cca gaa gtt tcg gtg act tac tac ctg cct tac aag tct
 288
 Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
 85 90 95

cca ggg atc aat gtg gac agt tcc tac aag aac agg ggc cat ctg tcc
 336

A-579D.ST25.txt

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
 100 105 110

ctg gac tcc atg aag cag ggt aac ttc tct ctg tac ctg aag aat gtc
 384
 Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
 115 120 125

acc cct cag gat acc cag gag ttc aca tgc cgg gta ttt atg aat aca
 432
 Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
 130 135 140

gcc aca gag tta gtc aag atc ttg gaa gag gtg gtc agg ctg cgt gtg
 480
 Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
 145 150 155 160

gca gca aac ttc agt aca cct gtc atc agc acc tct gat agc tcc aac
 528
 Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
 165 170 175

ccg ggc cag gaa cgt acc tac acc tgc atg tcc aag aat ggc tac cca
 576
 Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
 180 185 190

gag ccc aac ctg tat tgg atc aac aca acg gac aat agc cta ata gac
 624
 Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
 195 200 205

acg gct ctg cag aat aac act gtc tac ttg aac aag ttg ggc ctg tat
 672
 Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
 210 215 220

gat gta atc agc aca tta agg ctc cct tgg aca tct cgt ggg gat gtt

A-579D.ST25.txt

720

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val

225 230 235 240

ctg tgc tgc gta gag aat gtg gct ctc cac cag aac atc act agc att

768

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile

245 250 255

agc cag gca gaa agt ttc act gga aat aac aca aag aac cca cag gaa

816

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu

260 265 270

acc cac aat aat gag tta aaa gtc ctt gtc ccc gtc ctt gct gta ctg

864

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu

275 280 285

gcg gca gcg gca ttc gtt tcc ttc atc ata tac aga cgc acg cgt ccc

912

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro

290 295 300

cac cga agc tat aca gga ccc aag act gta cag ctt gaa ctt aca gac

960

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp

305 310 315 320

cac gcc

966

His Ala

<210> 7
<211> 322
<212> PRT
<213> Mouse

<400> 7

A-579D.ST25.txt

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
290 295 300

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
305 310 315 320

His Ala

<210> 8
<211> 322
<212> PRT
<213> Mouse

<400> 8

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

A-579D.ST25.txt

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
290 295 300

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
305 310 315 320

His Ala

<210> 9
<211> 306
<212> PRT
<213> Mouse

<400> 9

Met Ala Cys Asn Cys Gln Leu Met Gln Asp Thr Pro Leu Leu Lys Phe
1 5 10 15

A-579D.ST25.txt

Pro Cys Pro Arg Leu Ile Leu Leu Phe Val Leu Leu Ile Arg Leu Ser
 20 25 30
 Gln Val Ser Ser Asp Val Asp Glu Gln Leu Ser Lys Ser Val Lys Asp
 35 40 45
 Lys Val Leu Leu Pro Cys Arg Tyr Asn Ser Pro His Glu Asp Glu Ser
 50 55 60
 Glu Asp Arg Ile Tyr Trp Gln Lys His Asp Lys Val Val Leu Ser Val
 65 70 75 80
 Ile Ala Gly Lys Leu Lys Val Trp Pro Glu Tyr Lys Asn Arg Thr Leu
 85 90 95
 Tyr Asp Asn Thr Thr Tyr Ser Leu Ile Ile Leu Gly Leu Val Leu Ser
 100 105 110
 Asp Arg Gly Thr Tyr Ser Cys Val Val Gln Lys Lys Glu Arg Gly Thr
 115 120 125
 Tyr Glu Val Lys His Leu Ala Leu Val Lys Leu Ser Ile Lys Ala Asp
 130 135 140
 Phe Ser Thr Pro Asn Ile Thr Glu Ser Gly Asn Pro Ser Ala Asp Thr
 145 150 155 160
 Lys Arg Ile Thr Cys Phe Ala Ser Gly Gly Phe Pro Lys Pro Arg Phe
 165 170 175
 Ser Trp Leu Glu Asn Gly Arg Glu Leu Pro Gly Ile Asn Thr Thr Ile
 180 185 190
 Ser Gln Asp Pro Glu Ser Glu Leu Tyr Thr Ile Ser Ser Gln Leu Asp
 195 200 205
 Phe Asn Thr Thr Arg Asn His Thr Ile Lys Cys Leu Ile Lys Tyr Gly
 210 215 220
 Asp Ala His Val Ser Glu Asp Phe Thr Trp Glu Lys Pro Pro Glu Asp
 225 230 235 240
 Pro Pro Asp Ser Lys Asn Thr Leu Val Leu Phe Gly Ala Gly Phe Gly
 245 250 255
 Ala Val Ile Thr Val Val Val Ile Val Val Ile Ile Lys Cys Phe Cys
 260 265 270
 Lys His Arg Ser Cys Phe Arg Arg Asn Glu Ala Ser Arg Glu Thr Asn
 275 280 285
 Asn Ser Leu Thr Phe Gly Pro Glu Glu Ala Leu Ala Glu Gln Thr Val
 290 295 300
 Phe Leu

305

<210> 10
 <211> 327
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<220>
 <221> misc_feature
 <223> Unspecified amino acid

<400> 10

Met Xaa Xaa Xaa Cys Xaa Cys Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Pro
 1 5 10 15
 Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa
 20 25 30
 Leu Phe Xaa Leu Leu Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Xaa
 35 40 45
 Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Val Xaa Leu Xaa Cys Xaa
 50 55 60
 Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Tyr Trp
 65 70 75 80
 Gln Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa
 85 90 95
 Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Tyr Lys Asn Arg Xaa Xaa Xaa
 100 105 110
 Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Leu Xaa Xaa Xaa Xaa
 115 120 125
 Xaa Xaa Xaa Xaa Asp Xaa Xaa Xaa Xaa Xaa Cys Xaa Val Xaa Xaa Xaa
 130 135 140
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Leu Xaa
 145 150 155 160
 Xaa Xaa Ala Xaa Phe Ser Thr Pro Xaa Ile Xaa Xaa Ser Xaa Xaa Xaa
 165 170 175
 Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Thr Cys Xaa Xaa Xaa Xaa Gly Xaa
 180 185 190
 Pro Xaa Pro Xaa Xaa Xaa Trp Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa
 195 200 205

A-579D.ST25.txt

Ile Xaa Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 210 215 220
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa
 225 230 235 240
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 245 250 255
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa
 260 265 270
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Val Xaa Val Xaa Xaa
 275 280 285
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa
 290 295 300
 Xaa Arg Xaa Xaa Xaa Xaa Ser Xaa Thr Xaa Gly Pro Xaa Xaa Xaa Xaa
 305 310 315 320
 Xaa Glu Xaa Thr Xaa Xaa Xaa
 325

<210> 11
 <211> 864
 <212> DNA
 <213> Mouse

<220>
 <221> CDS
 <222> (1)..(864)

<400> 11
 atg cgg ctg ggc agt cct gga ctg ctc ttc ctg ctc ttc agc agc ctt
 48
 Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
 1 5 10 15

cga gct gat act cag gag aag gaa gtc aga gcg atg gta ggc agc gac
 96
 Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
 20 25 30

gtg gag ctc agc tgc gct tgc cct gaa gga agc cgt ttt gat tta aat
 144
 Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45

A-579D.ST25.txt

gat gtt tac gta tat tgg caa acc agt gag tcg aaa acc gtg gtg acc
 192
 Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60

 tac cac atc cca cag aac agc tcc ttg gaa aac gtg gac agc cgc tac
 240
 Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80

 cgg aac cga gcc ctg atg tca ccg gcc ggc atg ctg cgg ggc gac ttc
 288
 Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95

 tcc ctg cgc ttg ttc aac gtc acc ccc cag gac gag cag aag ttt cac
 336
 Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110

 tgc ctg gtg ttg agc caa tcc ctg gga ttc cag gag gtt ttg agc gtt
 384
 Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
 115 120 125

 gag gtt aca ctg cat gtg gca gca aac ttc agc gtg ccc gtc gtc agc
 432
 Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140

 gcc ccc cac agc ccc tcc cag gat gag ctc acc ttc acg tgt aca tcc
 480
 Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160

 ata aac ggc tac ccc agg ccc aac gtg tac tgg atc aat aag acg gac
 528
 Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175

aac agc ctg ctg gac cag gct ctg cag aat gac acc gtc ttc ttg aac
576

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn

180

185

190

atg cgg ggc ttg tat gac gtg gtc agc gtg ctg agg atc gca cgg acc
624

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr

195

200

205

ccc agc gtg aac att ggc tgc tgc ata gag aac gtg ctt ctg cag cag
672

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln

210

215

220

aac ctg act gtc ggc agc cag aca gga aat gac atc gga gag aga gac
720

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp

225

230

235

240

aag atc aca gag aat cca gtc agt acc ggc gag aaa aac gcg gcc acg
768

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr

245

250

255

tgg agc atc ctg gct gtc ctg tgc ctg ctt gtg gtc gtg gcg gtg gcc
816

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala

260

265

270

ata ggc tgg gtg tgc agg gac cga tgc ctc caa cac agc tat gca ggt
864

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly

275

280

285

<210> 12
<211> 288
<212> PRT

<213> Mouse

<400> 12

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
 1 5 10 15
 Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
 20 25 30
 Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45
 Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60
 Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80
 Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95
 Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110
 Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
 115 120 125
 Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140
 Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160
 Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175
 Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
 180 185 190
 Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
 195 200 205

A-579D.ST25.txt

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

<210> 13

<211> 267

<212> PRT

<213> Human

<400> 13

Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp Val Glu Leu Ser Cys
1 5 10 15

Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn Asp Val Tyr Val Tyr
20 25 30

Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr Tyr His Ile Pro Gln
35 40 45

Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr Arg Asn Arg Ala Leu
50 55 60

Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe Ser Leu Arg Leu Phe
65 70 75 80

Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His Cys Leu Val Leu Ser
85 90 95

Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val Glu Val Thr Leu His
100 105 110

Val Ala Ala Asn Phe Ser Val Pro Val Val Ser Ala Pro His Ser Pro
115 120 125

Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser Ile Asn Gly Tyr Pro
130 135 140

A-579D.ST25.txt

Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp Asn Ser Leu Leu Asp
145 150 155 160

Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn Met Arg Gly Leu Tyr
165 170 175

Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr Pro Ser Val Asn Ile
180 185 190

Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln Asn Leu Thr Val Gly
195 200 205

Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp Lys Ile Thr Glu Asn
210 215 220

Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr Trp Ser Ile Leu Ala
225 230 235 240

Val Leu Cys Leu Leu Val Val Val Ala Val Ala Ile Gly Trp Val Cys
245 250 255

Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
260 265

<210> 14
<211> 276
<212> PRT
<213> Mouse

<400> 14

Glu Thr Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys
1 5 10 15

Ile Asp Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr
20 25 30

Trp Gln Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr
35 40 45

Lys Ser Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His
50 55 60

Leu Ser Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys
65 70 75 80

Asn Val Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met
85 90 95

Asn Thr Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu
100 105 110

Arg Val Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser
115 120 125

A-579D.ST25.txt

Ser Asn Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly
 130 135 140
 Tyr Pro Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu
 145 150 155 160
 Ile Asp Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly
 165 170 175
 Leu Tyr Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly
 180 185 190
 Asp Val Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr
 195 200 205
 Ser Ile Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro
 210 215 220
 Gln Glu Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala
 225 230 235 240
 Val Leu Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr
 245 250 255
 Arg Pro His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu
 260 265 270
 Thr Asp His Ala
 275

<210> 15
 <211> 280
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic

<220>
 <221> misc_feature
 <223> Unspecified amino acid

<400> 15

Glu Xaa Glu Val Xaa Ala Met Val Gly Ser Xaa Val Xaa Leu Ser Cys
 1 5 10 15
 Xaa Xaa Pro Xaa Xaa Xaa Xaa Phe Xaa Leu Xaa Xaa Xaa Tyr Val Tyr
 20 25 30
 Trp Gln Xaa Xaa Xaa Xaa Xaa Xaa Val Thr Tyr Xaa Xaa Pro Xaa
 35 40 45
 Xaa Ser Xaa Xaa Xaa Asn Val Asp Ser Xaa Tyr Xaa Asn Arg Xaa Xaa

50

55

60

Xaa Ser Xaa Xaa Xaa Met Xaa Xaa Gly Xaa Phe Ser Leu Xaa Leu Xaa
 65 70 75 80
 Asn Val Thr Pro Gln Asp Xaa Gln Xaa Phe Xaa Cys Xaa Val Xaa Xaa
 85 90 95
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Val Xaa Leu
 100 105 110
 Xaa Val Ala Ala Asn Phe Ser Xaa Pro Val Xaa Ser Xaa Xaa Xaa Ser
 115 120 125
 Xaa Xaa Xaa Xaa Xaa Glu Xaa Thr Xaa Thr Cys Xaa Ser Xaa Asn Gly
 130 135 140
 Tyr Pro Xaa Pro Asn Xaa Tyr Trp Ile Asn Xaa Thr Asp Asn Ser Leu
 145 150 155 160
 Xaa Asp Xaa Ala Leu Gln Asn Xaa Thr Val Xaa Leu Asn Xaa Xaa Gly
 165 170 175
 Leu Tyr Asp Val Xaa Ser Xaa Leu Arg Xaa Xaa Xaa Thr Xaa Xaa Xaa
 180 185 190
 Xaa Xaa Xaa Cys Cys Xaa Glu Asn Val Xaa Leu Xaa Gln Asn Xaa Thr
 195 200 205
 Xaa Xaa Ser Gln Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Lys Xaa Xaa Xaa
 210 215 220
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu
 225 230 235 240
 Ala Val Leu Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Ile Xaa Xaa Xaa
 245 250 255
 Xaa Arg Xaa Arg Xaa Xaa Xaa Xaa Ser Tyr Xaa Gly Xaa Xaa Xaa Xaa
 260 265 270
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 275 280

<210> 16
 <211> 1294
 <212> DNA
 <213> Human

<220>
 <221> 5'UTR
 <222> (1)..(199)

<220>
 <221> CDS

<222> (200)..(1105)

<400> 16

gctggtacgc ctgcaggtac cggtccggaa ttcccgggtc gacccacgcg tccgcccacg
60cgtccgcggg agcgcagtta gagccgatct cccgcgcccc gaggttgctc ctctccgagg
120tctcccgcgg cccaagttct ccgcgccccg aggtctccgc gccccgaggt ctccgcggcc
180cgaggtctcc gcccgccacc atg cgg ctg ggc agt cct gga ctg ctc ttc ctg
232

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu

1

5

10

ctc ttc agc agc ctt cga gct gat act cag gag aag gaa gtc aga gcg
280

Leu Phe Ser Ser Leu Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala

15

20

25

atg gta ggc agc gac gtg gag ctc agc tgc gct tgc cct gaa gga agc
328

Met Val Gly Ser Asp Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser

30

35

40

cgt ttt gat tta aat gat gtt tac gta tat tgg caa acc agt gag tcg
376

Arg Phe Asp Leu Asn Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser

45

50

55

aaa acc gtg gtg acc tac cac atc cca cag aac agc tcc ttg gaa aac
424

Lys Thr Val Val Thr Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn

60

65

70

75

gtg gac agc cgc tac cgg aac cga gcc ctg atg tca ccg gcc ggc atg
472

Val Asp Ser Arg Tyr Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met

80

85

90

ctg cgg ggc gac ttc tcc ctg cgc ttg ttc aac gtc acc ccc cag gac

INS
AI

A-579D.ST25.txt

520

Leu Arg Gly Asp Phe Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp

95

100

105

gag cag aag ttt cac tgc ctg gtg ttg agc caa tcc ctg gga ttc cag

568

Glu Gln Lys Phe His Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln

110

115

120

gag gtt ttg agc gtt gag gtt aca ctg cat gtg gca gca aac ttc agc

616

Glu Val Leu Ser Val Glu Val Thr Leu His Val Ala Ala Asn Phe Ser

125

130

135

gtg ccc gtc gtc agc gcc ccc cac agc ccc tcc cag gat gag ctc acc

664

Val Pro Val Val Ser Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr

140

145

150

155

ttc acg tgt aca tcc ata aac ggc tac ccc agg ccc aac gtg tac tgg

712

Phe Thr Cys Thr Ser Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp

160

165

170

atc aat aag acg gac aac agc ctg ctg gac cag gct ctg cag aat gac

760

Ile Asn Lys Thr Asp Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp

175

180

185

acc gtc ttc ttg aac atg cgg ggc ttg tat gac gtg gtc agc gtg ctg

808

Thr Val Phe Leu Asn Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu

190

195

200

agg atc gca cgg acc ccc agc gtg aac att ggc tgc tgc ata gag aac

856

Arg Ile Ala Arg Thr Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn

205

210

215

A-579D.ST25.txt

gtg ctt ctg cag cag aac ctg act gtc ggc agc cag aca gga aat gac
904

Val Leu Leu Gln Gln Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp

220 225 230 235

atc gga gag aga gac aag atc aca gag aat cca gtc agt acc ggc gag
952

Ile Gly Glu Arg Asp Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu

240 245 250

aaa aac gcg gcc acg tgg agc atc ctg gct gtc ctg tgc ctg ctt gtg
1000

Lys Asn Ala Ala Thr Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val

255 260 265

gtc gtg gcg gtg gcc ata ggc tgg gtg tgc agg gac cga tgc ctc caa
1048

Val Val Ala Val Ala Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln

270 275 280

cac agc tat gca ggt gcc tgg gct gtg agt ccg gag aca gag ctc act
1096

His Ser Tyr Ala Gly Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr

285 290 295

ggc cac gtt tgaccggagc tcaccgcccc gagcgtggac agggcttccg
1145

Gly His Val

300

tgagacgcca ccgtgagagg ccaggtggca gcttgagcat ggactcccag actgcagggg
1205

agcacttggg gcagccccca gaaggaccac tgctggatcc cagggagAAC ctgctggcgt
1265

tggctgtgat cctggaatga ggccctttc
1294

<210> 17
<211> 302
<212> PRT

<213> Human

<400> 17

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
 1 5 10 15
 Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
 20 25 30
 Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45
 Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60
 Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80
 Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95
 Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110
 Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
 115 120 125
 Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140
 Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160
 Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175
 Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
 180 185 190
 Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
 195 200 205

A-579D.ST25.txt

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
290 295 300

<210> 18

<211> 302

<212> PRT

<213> Human

<400> 18

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
35 40 45

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125

INS
A1

A-579D.ST25.txt

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
165 170 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
290 295 300

<210> 19
<211> 322
<212> PRT
<213> Mouse

<400> 19

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

A-579D.ST25.txt

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
 85 90 95
 Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
 100 105 110
 Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
 115 120 125
 Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
 130 135 140
 Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
 145 150 155 160
 Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
 165 170 175
 Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
 180 185 190
 Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
 195 200 205
 Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
 210 215 220
 Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
 225 230 235 240
 Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
 245 250 255
 Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
 260 265 270
 Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
 275 280 285
 Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
 290 295 300
 His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
 305 310 315 320

His Ala

<210> 20
 <211> 329
 <212> PRT
 <213> Artificial

<220>

<223> Synthetic

<220>

<221> misc_feature

<223> Unspecified amino acid

<400> 20

Met Xaa Leu Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Leu Xaa
 20 25 30

Leu Phe Xaa Leu Leu Xaa Ser Ser Leu Xaa Ala Xaa Xaa Xaa Glu Xaa
 35 40 45

Glu Val Xaa Ala Met Val Gly Ser Xaa Val Xaa Leu Ser Cys Xaa Xaa
 50 55 60

Pro Xaa Xaa Xaa Xaa Phe Xaa Leu Xaa Xaa Xaa Tyr Val Tyr Trp Gln
 65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Thr Tyr Xaa Xaa Pro Xaa Xaa Ser
 85 90 95

Xaa Xaa Xaa Asn Val Asp Ser Xaa Tyr Xaa Asn Arg Xaa Xaa Xaa Ser
 100 105 110

Xaa Xaa Xaa Met Xaa Xaa Gly Xaa Phe Ser Leu Xaa Leu Xaa Asn Val
 115 120 125

Thr Pro Gln Asp Xaa Gln Xaa Phe Xaa Cys Xaa Val Xaa Xaa Xaa Xaa
 130 135 140

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa Val Xaa Leu Xaa Val
 145 150 155 160

Ala Ala Asn Phe Ser Xaa Pro Val Xaa Ser Xaa Xaa Xaa Ser Xaa Xaa
 165 170 175

Xaa Xaa Xaa Glu Xaa Thr Xaa Thr Cys Xaa Ser Xaa Asn Gly Tyr Pro
 180 185 190

Xaa Pro Asn Xaa Tyr Trp Ile Asn Xaa Thr Asp Asn Ser Leu Xaa Asp
 195 200 205

Xaa Ala Leu Gln Asn Xaa Thr Val Xaa Leu Asn Xaa Xaa Gly Leu Tyr
 210 215 220

Asp Val Xaa Ser Xaa Leu Arg Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa
 225 230 235 240

Xaa Cys Cys Xaa Glu Asn Val Xaa Leu Xaa Gln Asn Xaa Thr Xaa Xaa

245

250

255

Ser Gln Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa
 260 265 270

Xaa Xaa Xaa Xaa Xaa Xaa Lys Xaa Xaa Xaa Xaa Xaa Xaa Leu Ala
 275 280 285

Val Leu Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Ile Xaa Xaa Xaa Xaa
 290 295 300

Arg Xaa Arg Xaa Xaa Xaa Xaa Ser Tyr Xaa Gly Xaa Xaa Xaa Val Xaa
 305 310 315 320

Xaa Glu Xaa Xaa Leu Thr Xaa His Xaa
 325

<210> 21
 <211> 1370
 <212> DNA
 <213> Human

<220>
 <221> 5'UTR
 <222> (1)..(165)

<220>
 <221> CDS
 <222> (166)..(762)

<400> 21
 aacaatttca cacaggaaac agctatgacc atgattacgc caagctctaa tacgactcac
 60

tatagggaaa gctggtacgc ctgcaggtag cggtccggaa ttcccggggtc gaccacgcgc
 120

tccgtgaaca ctgaacgcga ggactgttaa ctgtttctgg caaac atg aag tca ggc
 177

Met Lys Ser Gly

1

ctc tgg tat ttc ttt ctc ttc tgc ttg cgc att aaa gtt tta aca gga
 225

Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys Val Leu Thr Gly

5 10 15 20

gaa atc aat ggt tct gcc aat tat gag atg ttt ata ttt cac aac gga
 273

Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile Phe His Asn Gly

25

30

35

ggt gta caa att tta tgc aaa tat cct gac att gtc cag caa ttt aaa
321

Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val Gln Gln Phe Lys

40

45

50

atg cag ttg ctg aaa ggg ggg caa ata ctc tgc gat ctc act aag aca
369

Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp Leu Thr Lys Thr

55

60

65

aaa gga agt gga aac aca gtg tcc att aag agt ctg aaa ttc tgc cat
417

Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu Lys Phe Cys His

70

75

80

tct cag tta tcc aac aac agt gtc tct ttt ttt cta tac aac ttg gac
465

Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu Tyr Asn Leu Asp

85

90

95

100

cat tct cat gcc aac tat tac ttc tgc aac cta tca att ttt gat cct
513

His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser Ile Phe Asp Pro

105

110

115

cct cct ttt aaa gta act ctt aca gga gga tat ttg cat att tat gaa
561

Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu His Ile Tyr Glu

120

125

130

tca caa ctt tgt tgc cag ctg aag ttc tgg tta ccc ata gga tgt gca
609

Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro Ile Gly Cys Ala

135

140

145

gcc ttt gtt gta gtc tgc att ttg gga tgc ata ctt att tgt tgg ctt
657

Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu Ile Cys Trp Leu

(NS
A1

150

155

160

aca aaa aag aag tat tca tcc agt gtg cac gac cct aac ggt gaa tac
705

Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro Asn Gly Glu Tyr

165

170

175

180

atg ttc atg aga gca gtg aac aca gcc aaa aaa tct aga ctc aca gat
753

Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser Arg Leu Thr Asp

185

190

195

gtg acc cta taatatggaa ctctggcacc cagggcatgaa gcacgttggc
802

Val Thr Leu

cagttttcct caacttgaag tgcaagattc tcttatttcc gggaccacgg agagtctgac
862

ttaactacat acatcttctg ctgggtgtttt gttcaatctg gaagaatgac tgtatcagtc
922

aatgggggatt ttaacagact gccttggtac tgccgagtc tctcaaaaca aacaccctct
982

tgcaaccagc tttggagaaa gccagctcc tgtgtgtctca ctgggagtgg aatccctgtc
1042

tccacatctg ctctagcag tgcacagcc agtaaaacaa acacatttac aagaaaaatg
1102

ttttaaagat gccaggggta ctgaatctgc aaagcaaatg agcagccaag gaccagcatc
1162

tgccgcatt tcaactatcat actacctctt ctttctgtag ggatgagaat tcctctttta
1222

atcagtcaag ggagatgctt caaagctgga gctattttat ttctgagatg ttgatgtgaa
1282

ctgtacatta gtacatactc agtactctcc ttcaattgct gaaccccagt tgaccatttt
1342

accaagactt tagatgcttt cttgtgcc
1370

A-579D.ST25.txt

<210> 22
<211> 199
<212> PRT
<213> Human

<400> 22

Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
1 5 10 15

Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
20 25 30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
35 40 45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
65 70 75 80

Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
115 120 125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
130 135 140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
145 150 155 160

Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
165 170 175

Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
180 185 190

Arg Leu Thr Asp Val Thr Leu
195

<210> 23
<211> 199
<212> PRT
<213> Human

<400> 23

Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
1 5 10 15

Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
20 25 30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
35 40 45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
65 70 75 80

Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
115 120 125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
130 135 140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
145 150 155 160

Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
165 170 175

Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
180 185 190

Arg Leu Thr Asp Val Thr Leu
195

<210> 24
<211> 200
<212> PRT
<213> Mouse

<400> 24

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
 1 5 10 15
 Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
 20 25 30
 Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
 35 40 45
 Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
 50 55 60
 Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
 65 70 75 80
 Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
 85 90 95
 Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
 100 105 110
 Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
 115 120 125
 Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
 130 135 140
 Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
 145 150 155 160
 Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
 165 170 175
 Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
 180 185 190
 Ser Arg Leu Ala Gly Val Thr Ser
 195 200

<210> 25

<211> 24

<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 25

accatgcggc tgggcagtcg tgga

24

<210> 26
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic Oglionucleotide

<400> 26
tgggtgaccta ccacatccca cag
23

<210> 27
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic Oglionucleotide

<400> 27
tccgatgtca tttcctgtct ggc
23

INS
A1
<210> 28
<211> 24
<212> DNA
<213> Artificial

<220>
<223> Synthetic Oglionucleotide

<400> 28
gctctgtctc cggactcaca gccc
24

<210> 29
<211> 28
<212> DNA
<213> Artificial

<220>
<223> Synthetic Oglionucleotide

<400> 29
gtggcagcaa acttcagcgt gcccgtcg
28

<210> 30
<211> 28
<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 30

cccaacgtgt actggatcaa taagacgg
28

<210> 31

<211> 28

<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 31

gcgtgctgag gatcgacagg acccccag
28

<210> 32

<211> 21

<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 32

gcctctagaa agagctggga c
21

<210> 33

<211> 21

<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 33

cgccgtgttc catttatgag c
21

<210> 34

<211> 18

<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 34

gcatatttat gaatccca
18

<210> 35

<211> 18

<212> DNA

<213> Artificial

<220>

<223> Synthetic Oglionucleotide

<400> 35

actattaggg tcatgcac
18